Tell us a little about yourself

What kind of information is needed in project reports? How will these data be used? When are project reports due? How should Federal support be acknowledged? When is project outreach "good enough"? This overview addresses many of the questions received by program officers. Although drawn from broad common experience, exceptions to these guidelines are inevitable. Specific questions for particular programs may not be included here. If you are new awardee or are unfamiliar with the expectations of your particular program, answers are just a phone call or an e-mail away. A working dialogue with your program officer is prerequisite to effective information exchange and the successful completion of your NSF-funded research or education project.

Plan the Work, Work the Plan

The consideration of proposals during merit review is based on two fundamental criteria stipulated by the National Science Board. To paraphrase these criteria, Criterion 1 asks: *What is the Intellectual Merit of the Proposed Work?* Criterion 2 asks: *What are the Broader Impacts of the Proposed Work?* Addressing these two criteria in the description of your work provides a good initial estimate of the project's *viability*.

A related consideration is uniqueness. That is, how well does the work advance or improve upon previous efforts? What is its *contribution* to the knowledge base? Experience shows that every successful project has a defined framework. In practice this structure may be produced in any number of ways, but a fundamental consideration is the roles and responsibilities of the various individuals and institutions involved. Determining such roles at the proposal stage provides assurance that sufficient project *direction* is in place. Next, a reviewer may want to see what partnerships the project has in place. Whether your project is part of a large alliance or operates on a single campus, partnerships demonstrate the community's *commitment* to the project, which ultimately will determine the project's sustainability irrespective of current or future Federal support.

Collectively and individually, these basic considerations lead to the kind of information requested from your work before and after a grant is awarded.

Reporting and Evaluation

Reporting and evaluation objectively communicate the progress of your project. For the funding agency, the merits of project reports are the best way to document program effectiveness. Project reports, immediate accomplishments (often called products or *outputs*) and long-term, measurable changes (often called systemic changes or *outcomes*) are the most direct measures of a project's success. It may surprise you to consider that "success" does not necessarily mean "spectacularly positive". There are valuable lessons to be learned from failures and disappointments. Reporting these, along with constructive evaluations and alternatives, may lead to a better solution for you or the research community.

Annual reporting obligations are not intended to be an undue burden on the investigator's time. In general, keeping a daily or weekly log of the project's efforts provides a source of information that can be summarized and transferred to the Fastlane report template in an hour or two and, usually, in less than 20 pages. Again, the requirements of your particular program may differ.

What to Report - Remember GPRA

Consider the following observation of Michael Patton (1982), which speaks to the heart of nearly every academic exercise:

> *If there is nothing you are trying to find out, there is nothing you will find out.*

The National Science Foundation (NSF) is unique in its role to support basic research in the United States. In the context of Federal reporting guidelines, the process of documenting research outcomes becomes a bit more rigorous, as illustrated in this excerpt from Osborne and Gaebler's *Reinventing Government* (1992):

> *What gets measured, gets done.*
> *If you don't measure results,*
> *You can't tell success from failure.*
> *If you can't recognize failure, you can't correct it.*
> *If you can't see success, you can't reward it.*
> *If you can't see success, you can't learn from it.*

The need to chart measurable gains in the government's performance led to 1993's Government Performance and Results Act (GPRA). A decade later, GPRA remains as an important cornerstone for documenting government responsiveness and measurable outcomes. The indicators for Fiscal Year 2004 are summarized in Exhibit 1.

The National Science Foundation's strategic goals for PEOPLE, IDEAS, and TOOLS relate directly to corresponding GPRA categories. As a project manager, you should be aware that these indicators will provide the basis for your program officer's reporting on the effectiveness of his or her program. Accordingly, questions about your project may be expected in these areas.

Note: Any given project is assigned to one or more GPRA indicators by the cognizant program officer and only *after* the award is made. *Since the indicators change slightly from year to year, you should not try to speculate or suggest which indicators should apply to your project; your program officer will determines such things, as appropriate*.

Exhibit 1

FY 2004 Strategic Goals and GPRA Indicators

PEOPLE GOAL

A DIVERSE, COMPETITIVE, AND GLOBALLY ENGAGED U.S. WORKFORCE OF SCIENTISTS, ENGINEERS, TECHNOLOGISTS AND WELL-PREPARED CITIZENS

Goal Indicators

P1: Promote greater diversity in the science and engineering workforce through increased participation of underrepresented groups and institutions in all NSF programs and activities.

P2: Support programs that attract and prepare U.S. students to be highly qualified members of the global S&E workforce, including providing opportunities for international study, collaborations and partnerships.

P3: Develop the Nation's capability to provide K-12 and higher education faculty with opportunities for continuous learning and career development in science, technology, engineering and mathematics.

P4: Promote public understanding and appreciation of science, technology, engineering, and mathematics, and build bridges between formal and informal science education.

P5: Support innovative research on learning, teaching and mentoring that provides a scientific basis for improving science, technology, engineering and mathematics education at all levels.

IDEAS GOAL

DISCOVERY ACROSS THE FRONTIER OF SCIENCE AND ENGINEERING, CONNECTED TO LEARNING, INNOVATION, AND SERVICE TO SOCIETY

Goal Indicators

I1: Enable people who work at the forefront of discovery to make important and significant contributions to science and engineering knowledge.

I2: Encourage collaborative research and education efforts – across organizations, disciplines, sectors and international boundaries.

I3: Foster connections between discoveries and their use in the service of society.

I4: Increase opportunities for underrepresented individuals and institutions to conduct high quality, competitive research and education activities.

I5: Provide leadership in identifying and developing new research and education opportunities within and across S&E fields.

I6: Accelerate progress in selected S&E areas of high priority by creating new integrative and cross-disciplinary knowledge and tools, and by providing people with new skills and perspectives.

TOOLS GOAL

BROADLY ACCESSIBLE, STATE-OF-THE-ART S&E FACILITIES, TOOLS AND OTHER INFRASTRUCTURE THAT ENABLE DISCOVERY, LEARNING AND INNOVATION

Goal Indicators

T1: Expand opportunities for U.S. researchers, educators, and students at all levels to access state-of-the-art S&E facilities, tools, databases, and other infrastructure.

T2: Provide leadership in the development, construction, and operation of major, next-generation facilities and other large research and education platforms.

T3: Develop and deploy an advanced cyber-infrastructure to enable all fields of science and engineering to fully utilize state-of-the-art computation.

T4: Provide for the collection and analysis of the scientific and technical resources of the U.S. and other nations to inform policy formulation and resource allocation.

T5: Support research that advances instrument technology and leads to the development of next-generation research and education tools.

Other Useful Information to Include in Reports

GPRA indicators are a good place to start when deciding what to report about a given project, but there is much more information your program officer would like to know. From time to time, NSF features awarded projects via press releases, award data, program summaries, speeches, and articles about NSF initiatives. In such instances it is especially important for NSF staff to be aware of substantive project outcomes, often in-between the usual annual reporting dates. Exhibit 2 provides some useful examples of information that will help ensure NSF highlights the things you feel are accurately representative of your work.

Exhibit 2

Other Useful Information to Include in Reports

In the past year*, what are the 3 most significant accomplishments of your project?

In the past year, what are the 3 largest concerns or surprises that have arisen in your project?

In the past year, how has your project directly or measurably changed the academic climate of your institution?

If applicable, describe how the project has deviated from its intended progress in the past year, or how you anticipate it may deviate in the year to come? Why?

Describe the aspects of your program (pedagogy, methods, products, etc.) that may be considered ready for regional or national distribution as models or exemplars, either now or within the next year.

Describe your knowledge of or direct contact with current, similar projects in your state or neighboring states.

Describe your project's involvement with: a) industry, b) outside laboratories, c) international partners, and d) potential feeder schools, including the number of students and faculty directly involved in each activity.

If not discussed above, describe the number of actual participants in the: a) mentoring, and b) recruitment efforts of your project.

Provide specific data, as such are available, on actual student enrolment in your project. How much of an increase (or decrease) does this represent over the previous year? Over initial (baseline) levels? Compared to similar populations without NSF support?

For your project, include the number of successful graduates in the past year, the number anticipated in the next year, and (for final reports) the overall number of graduates produced by your project.

** Substitute "overall" for "in the past year" for final reports.*

Acknowledging Federal Support

Guidelines for acknowledging general NSF support are detailed in Section 19 ("Publications") in the NSF publication *Grant General Conditions* (GC-1), and the *Grant Proposal Guide* (GPG, NSF 04-2), Chapter VI, Section I ("Acknowledgment of Support and Disclaimer") available online and reproduced below.

I. ACKNOWLEDGMENT OF SUPPORT AND DISCLAIMER

An acknowledgment of NSF support and a disclaimer must appear in publications (including Web pages) of any material, whether copyrighted or not, based on or developed under NSF-supported projects:

"This material is based upon work supported by the National Science Foundation under Grant No. (grantee must enter NSF grant number)."

NSF support also must be orally acknowledged during all news media interviews, including popular media such as radio, television and newsmagazines.

Except for articles or papers published in scientific, technical or professional journals, the following disclaimer must be included:

"Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation."

It is also helpful to mention the award number, so that interest parties can reference the on-line abstract material for your project at nsf.gov. The search component of the NSF web site (http://www.nsf.gov/home/search.htm) offers full-text and fielded searches of all NSF awards since 1989. Project summaries (sponsor, investigator, contact info, NSF program association, and Abstract) can be browsed individually or grouped by institution, program, or state. NSF documents, staff, and Directorates can also be searched from this site. In addition, NSF's FastLane system (http://www.fastlane.nsf.gov/a6/A6Start.htm) provides a variety of search options, producing lists of recent awards, and lists of awards by state, program, and institution. As appropriate, awardees may also mention the specific and correct NSF program(s) responsible for their award as part of their acknowledgment.

Use of the NSF Logo

The official NSF logo is available electronically in various file formats for use by members of the public who wish to provide a link to an NSF website or to acknowledge NSF assistance as required by the "Publications" article of the Foundation's *Grant General Conditions*. No special permission is required from the National Science Foundation to reproduce these images. More information and links to the electronic files are available from the URL: http://www.nsf.gov/home/graphics/start.htm

Web Sites

Keeping your program officer responsible for your award apprised of the current and accurate uniform resource locator (URL) of your project's web site(s) is recommended. In addition, awardees are encouraged to provide a hyperlink from their web pages to a current, bibliography-style listing of all publications, presentations, products, documents, workshops, seminars, meetings, lectures, and other materials produced in whole or in part from their NSF support. This will provide NSF staff, the general public, and other interested parties with an accurate summary of your project's latest results, proper citations for products and publications, and ongoing impact. In our experience, the provision of such a resource provides NSF program officers with ready listing of the latest and most relevant project outcomes. Additionally, such listings may lessen the amount of detailed information the principal investigator is required to provide elsewhere regarding the project's activities. You may also elect to include a hyperlink to the NSF home page or the web page for the specific NSF program(s) from which your funding was received.

Audio and Video

NSF-funded activities are often featured as stories on radio and television broadcasts. Project staff are encouraged to keep an archive of project publicity received via print and electronic media. While it is usually not required, many awardees elect to use video production resources to create summaries or highlights of their activities. If not previously discussed within the scope of your proposal, we suggest the following for prepared video programming:

- We encourage you to produce the highest quality master tape permitted by your budget and resources. If your video can be clearly presented in venues as diverse as meeting rooms, television broadcasts, and video-conferences, its value for outreach purposes will be enhanced.
- Organize your message and present it succinctly. Tell a compelling story with a clear narrative, which is generally more informative than unstructured photo montages or musical overtures.
- Provide enough detail to be informative to a layperson but avoid being so specific that the useful "lifespan" of your program is too short. Videos longer than 15 minutes can often be complemented by shorter, summary versions of the same content.
- Address the broadest possible audience. Not everyone who views your program will be familiar with all the details of the award.
- Avoid using previously produced (copyright protected) video footage, soundtrack music, or narration unless full permission for their use have been secured and documented by the video's producer. Appropriate recognition of the project's participants, staff, and producers should be provided as determined by prior agreement.
- Recognition of NSF support and, as appropriate, mention of the NSF program responsible for the work depicted is appreciated.

***Tip:** Looking up the online abstract for your award on nsf.gov provides a quick, reliable confirmation of whether the basic award data (PIs, co-PIs, sponsor, beginning and end date) are correct for your project. If not, contact your program officer for clarification.*

Other Media

In addition to text presentations and electronic media, you may have other products, photos, reports, clippings, and research or instructional materials to share with your program officer. Before sending these materials, it is a good idea to check with the recipient to confirm that they have sufficient archive/library storage available. High-quality, engaging photos of your project work are often appreciated, but should be provided with appropriate captions and a statement from the photographer (or in, some cases, the participants) authorizing NSF reproduction and use. Check with your program officer to see whether he or she has a preferred format for receiving photos and electronic files.

When to Report

Reporting requirements for your particular grant may be stipulated in your award agreement, specified by your program officer or modified by approved no-cost extensions or amendments. In general, annual project reports are due at approximately 12-month intervals from the time your grant commences. Final reports are due no later than 90 days after the award's end date. All official reports must be submitted electronically via Fastlane (www.fastlane.nsf.gov) using the on-line report template (see Exhibit 3).

Exhibit 3

The Fastlane Template

The Fastlane report template is designed as a best-fit solution to accommodate the wide spectrum of NSF program needs. Considerations when completing the template include:

Check the type of report. Is the designation of annual (or final) report correct? Do the specified dates indicate the proper interval with no gaps or overlaps with previous reports for this project?

Specify ontributions of Key Personnel. Are the contributions of key staff sufficiently detailed? Have students been involved significantly in the project's operation?

List organizational Partners. Avoid exhaustive, non-specific rosters. Specify key partners and their respective contributions

Avoid file attachments. It is to your advantage to complete the Fastlane template as thoroughly as possible, completing all of the sections provided within the form and avoiding extraneous information or repeated references to voluminous, catch-all supplements.

Be aware of file compliance. The information you input to Fastlane is converted to Portable Document Format (.PDF). This means you should avoid using specialized fonts, which may result in bullet points and punctuation being corrupted before your program officer receives the file. Improperly formatted tables and lists may become illegible and certain graphics may not transfer properly. If in doubt, pre-test theconversion of your source file to .PDF using Adobe Acrobat 4.0 or higher.

Use input boxes properly. Not all Fastlane input boxes "wrap" text input to the displayed window. Placing a hard return at the end of each line to keep the information in view will result in a narrow, elongated block of text that is often hard to read. Composing the information offline, then copying it into the template should allow better margin-to-margin flow.

Report products fully and completely. Publications should be given full, searchable bibliographic references. Presentations and workshops should include titles, authors, date and location, as well as information about the size and composition of the audience. Partial, anecdotal, or incomplete references contribute little to the information content of your report.

Provide useful demographics. It may not be practical to list all participants in a project, but for classroom enrollments or conference presentations, it is a good idea to list the number of direct participants in the activity and their role (faculty, student, etc.)

Check your use of human subjects and hazardous materials. It is a good idea to review, on an annual basis, the various certifications your project requires for the use of human subjects and hazardous materials. Check with your institutional review board (IRB) for details.

Avoid redundancy. The last report entered for the project is readily available in Fastlane. Avoid the temptation to simply add a few updates to what is there and resubmit it as a new report. Annual reports should list only the products and activities for the specified report interval. Final reports should provide a chronological summary of all project accomplishments with a minimum of annotation to "see attached" or "see previous reports."

Be concise. As mentioned above, a concise report following the report template can be produced without undue effort. Goals and Objectives, nominally part of the proposal or proposal abstract, usually need not be reiterated in reports. Your report should focus on activities and outcomes (both good and bad) for the indicated period. It should provide the essential information to your program officer and apprise him or her of anticipated future needs or amended progress plans.

What is "Enough" Outreach?

In consideration of GPRA, there is an increased expectation to increase the dissemination of realized short- and long-term outcomes generated by all federally funded projects. It is advisable for products from your award to be of use to the broadest appropriate audience and to be made accessible to all individuals within that audience regardless of their ability.

Every project should aspire to further the knowledge base, contributing new discoveries to appropriate venues. Celebrating that achievement should go well beyond the reporting obligations of your award. Publications, products, and lists of proven-good practices are not required components of all awards, but are a good idea.You should also list notable outreach activities for each year of your award and include citations or clippings from your media coverage.

"Building a web site" or "distributing litrature" are common suggestions in proposals, but is this effective communication or simply passive broadcasting? Ideally, your original proposal will have specific suggestions for information dissemination and external evaluation. Researchers and educators working with minorities, women, persons with disabilities and other underserved populations should not hesitate to publish the results of their work in mainstream arenas, calling attention to the merits for all students and practitioners. Just as merit review answers the question, *is this a good idea?* proper project evaluations and publications in peer-reviewed journals answer the question, *are these good results?*

References

Government Performance and Results Act (GPRA). See: http://www.whitehouse.gov/omb/mgmt-gpra/gplaw2m.html

National Science Foundation Strategic Plan, 2003-2008. See http://www.nsf.gov/od/gpra/

Osbourne, D. and T. Gaebler (1992). *Reinventing Government: How the Entrepreneurial Spirit Is Transforming the Public Sector*. Plume Publishing, 432 pp.

Patton, MQ (1982). *Practical Evaluation*. Sage Publications, 320 pp.

In science, all facts, no matter how trivial or banal, enjoy democratic equality.
Mary McCarthy, On the Contrary (1961)

NSF's Electronic Information Systems and Contact Information

Contact Information

National Science Foundation	http://www.nsf.gov
Division of Human Resource Development (HRD)	http://www.ehr.nsf.gov/hrd/
Division of Grants and Agreements (DGA)	http://www.nsf.gov/bfa/dga/
National Science Board (NSB)	http://www.nsf.gov/nsb/
NSF Staff Directory	http://staff.nsf.gov/
HRD Staff Directory	http://staff.nsf.gov/orgpage.cfm?key=19

Fastlane

NSF's Fastlane system must be used to submit proposals, project reports, requests, and related official correspondence to the Foundation. Fastlane may also be used to search awards and provide summary lists by state, program, or institution.

Fastlane home page	http://www.fastlane.nsf.gov
Test server (for demonstration - no password required)	http://www.fldemo.nsf.gov
User guides	http://www.fastlane.nsf.gov/a0/about/instructions.htm
NSF requirements for PDF files	http://www.fastlane.nsf.gov/a1/pdfcreat.htm
Fastlane list of all NSF programs	https://www.fastlane.nsf.gov/servlet/A6QueryPgm
NSF Fastlane Help Desk	Phone: 800-673-6188 or 703-292-8142 e-mail: fastlane@nsf.gov
Division of Human Resource Development	Phone: 703-292-8640 HRD Fastlane e-mail: hrdfl@nsf.gov

Award Information

Guide to search tools	http://www.ehr.nsf.gov/hrd/award.asp
On-line abstracts of all NSF awards	http://www.fastlane.nsf.gov/a6/A6Start.htm

Frequently Asked Questions

Preparing and submitting proposals	http://www.nsf.gov/bfa/cpo/policy/ques.htm
Award administration	http://www.nsf.gov/bfa/dga/faq.htm

NSF Publications

Online Document Search	http://www.nsf.gov/cgi-bin/pubsys/browser/odbrowse.pl
Grant Proposal Guide	http://www.nsf.gov/cgi-bin/getpub?gpg
Guide to Programs	http://www.nsf.gov/cgi-bin/getpub?gp
NSF E-Bulletin (program deadlines)	http://www.nsf.gov/home/ebulletin/
Science and Engineering Indicators (2002)	http://www.nsf.gov/sbe/srs/seind02/start.htm
Committee on Equal Opportunities in Science and Engineering (CEOSE)	http://www.nsf.gov/od/ceose/start.htm

NSF Logos and Images of the NSF Building

(for use in publications and on web sites)

Color and black-and-white logos	http://www.nsf.gov/home/graphics/start.htm
Color logos for white backgrounds	http://www.nsf.gov/home/icons/logos/logoswh.html
NSF Office of Legislative and Public Affairs (OLPA)	http://www.nsf.gov/od/lpa/

About HRD

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The Division of Human Resource Development (HRD) - within the National Science Foundation's Directorate for Education and Human Resources - serves as a focal point for NSF's agency-wide commitment to enhancing the quality and excellence of science, technology, engineering, and mathematics (STEM) education and research for historically underrepresented groups.

HRD's programs aim to increase the participation and advancement of underrepresented minorities and minority-serving institutions, women and girls, and persons with disabilities at every level of the science and engineering enterprise.

Projects supported by HRD have a strong focus on partnerships and collaborations in order to maximize the preparation of a well-trained scientific and instructional workforce derived from our target constituents:

- Minorities and Minority-Serving Institutions
- Women and Girls
- Persons with Disabilities

For more information about HRD and its programs, visit:
http://www.ehr.nsf.gov/EHR/HRD/

Alliances for Graduate Education and the Professoriate (AGEP)

Centers for Research Excellence in Science and Technology (CREST)

Research on Gender in Science and Engineering (GSE)

Historically Black Colleges and Universities - Undergraduate Program (HBCU-UP)

**Historically Black Colleges and Universities
Research Infrastructure for Science and Engineering (HBCU-RISE)**

Louis Stokes Alliances for Minority Participation (LSAMP)

Model Institutions for Excellence (MIE)

**Presidential Awards for Excellence in Science, Mathematics,
and Engineering Mentoring (PAESMEM)**

Research in Disabilities Education (RDE)

Rural Systemic Initiatives (RSI)

Tribal Colleges and Universities Program (TCUP)